

On an Albino of *Paphiopedilum markianum* Fowlie: *Paphiopedilum markianum* forma *smaragdinum* (Z.J.Liu & S.C.Chen) Braem^a

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Abstract

The taxonomical and nomenclatural status of *Paphiopedilum markianum* forma *smaragdinum* is updated: *P. markianum* has priority against *P. tigrinum* and the correct taxonomic rank of the entity is the form.

Résumé

A propos d'un albinos de *Paphiopedilum markianum* Fowlie: *Paphiopedilum markianum* forma *smaragdinum* (Liu & S.C.Chen) Braem – Le statut taxinomique et nomenclatural de *Paphiopedilum markianum* forma *smaragdinum* est mis à jour: l'épithète *markianum* a priorité par rapport à *tigrinum* et le rang taxinomique correct pour l'entité objet de cet article est la forme, et non la variété.

Introduction

Paphiopedilum markianum, a species described by the late Dr. Jack Fowlie in 1990, is by now a well-known entity within the Vietnamese orchid flora. Unfortunately, the plant is generally listed under its synonymous name *P. tigrinum*, even though this name is the result of a misinterpretation of the rules of botanical nomenclature and is in clear violation of the rules of priority. Quite a bit has been said about the “battle” between *Paphiopedilum markianum* Fowlie and *P. tigrinum* Koopowitz & Hasegawa and the

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interested reader may refer to the pertinent literature. In the meantime, the controversy has settled around the question of whether the material sent was printed material and whether sending printed material by facsimile transmission (fax) in 1990 constituted valid publication.

The answer to both questions is simply “yes”. The pertinent part of the *International Code of Botanical Nomenclature* (article 29) effective at the time of the publication stated clearly: “Publication is effected ... by distribution of printed matter.” Nowhere does it state how this distribution has to be done. The fact is that the printed material with the publication of *P. markianum* reached the Oakes Ames Library at Harvard, Massachusetts, USA, and at least one European institution on May 24th of 1990. The material sent by Fowlie consisted of pages from a finished and printed copy of *Orchid Digest*. Cribb's claim (1998) that Fowlie sent galley proofs does not correspond to the facts, but even if Cribb's allegations had been correct, this would not have changed anything regarding the validity of the publication, as galley proofs are printed materials.

The concept of Koopowitz & Hasegawa, on the other hand, was not published before June 4th of that year. Thus there can be no doubt about the validity and priority of the name “*P. markianum*”.

In 2003, the Chinese authors Z.J. Liu and S.C. Chen published *Paphiopedilum smaragdinum* as an autonomous entity. The plant, however, has been proven to be a colour variant of *P. markianum*, and for that reason its taxonomical and nomenclatural status is here updated.

Paphiopedilum markianum* forma *smaragdinum* (Z.J.Liu & S.C.Chen) Braem, *comb. nov.

Basionym

Paphiopedilum smaragdinum Z.J.Liu & S.C.Chen
Journal of Wuhan Botanical Research, 21(6): 489-491 (2003)

Synonyms

Paphiopedilum tigrinum (Koopowitz & Hasegawa) forma *smaragdinum* (Z.J.Liu & S.C. Chen) Grufß
in *Die Orchidee*, 56(1): 71 (2005)

Paphiopedilum tigrinum (Koopowitz & Hasegawa) var. *smaragdinum* (Z.J. Liu & S.C. Chen) Z.J. Liu & S.C. Chen
in *The Genus Paphiopedilum in China*: 163 (2009)

This variant originates from Mt. Gaoligong, Pianma, Yunnan, where it was collected at an elevation of 2,500 metres. The variant differs from the nominal form of *P. markianum* only by the lack of dark spots and stripes on the flower parts. As the anthocyanin pigments are missing, this variant represents an albino of the species.

Paphiopedilum markianum (Fig. 1) is an herbaceous plant growing as a humus epiphyte in decaying leaf litter. The narrowly ligulate leaves, which are 9.0 to 22.5 cm long by 2.0 to 2.8 cm wide, are fleshy, uniformly light green, and not tessellated. The inflorescence usually carries a single flower. The scape is erect, shortly pilose, and about 12 to 21 cm long. The flower bract is approximately 3.5 cm long by 6 mm wide, distally spatulate, greenish-yellow, and pilose. The ovary is about the same length as the bract. The flower is about 7.5 cm across, measured from tip to tip over the petals in the natural state. The dorsal sepal is ovate, about 3.5 cm long by 2.8 cm wide, more or less strongly bent forward over the aperture, distally apiculate, and contracted at the base. It has a light green background colour with a dark lavender longitudinal stripe in the centre. On both sides of the median, it has two rows of longitudinally coalescing dark lavender spots, grading to lines. The synsepal is narrowly acuminate, very concave, and 3.0 to 3.3 cm long by about 1.8 cm wide. It has two dark purple-brown longitudinal lines with a spot on each side. The petals are ligulate, distally strongly expanded, apically mucronate, and strongly undulate on the top edges of the proximal two-thirds. They are about 5 cm long by 8 mm wide at the base, expanding distally to about 1.8 cm wide. The margins are covered with short white hairs. Petals are green at the base, grading to deep lavender in the distal third. They are covered with many dark purple hairs proximally and have two relatively parallel lines formed by brownish-lavender coalescing spots. These stripes run from the base to about 3/4 of the length of the petals and terminate in the uniform lavender colouration on the distal part of the widened petals. The pattern of lines and spots on the petals and sepals is greatly variable. The three-lobed lip is non-emarginate, light green overlaid tan with darker veining and has a main lobe shaped like an inverted helmet. It is distally rounded, about 3.3 to 3.8 cm long by 2.4 to 2.6 cm wide, and has distally erect margins that form prominent lateral auricles or "ears" on either side of the pouch. The side lobes are folded inward to form a tube. The staminodal shield, which is about 9 mm long by 5 mm wide, is oblong-ovate, distally non-emarginate, dorsally distinctly notched and with a single central boss.



Fig. 1: *Papiopedilum markianum* Fowlie



Fig. 2: *Papiopedilum markianum* forma *smaragdinum* Braem

The forma *smaragdinum* has yellowish-green flowers (Fig. 2). The apical parts of the petals are yellowish-white with green margins.

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photographs courtesy of Dr. Henry Oakeley (Fig. 1) and Z.J.Liu (Fig. 2)

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